

# SAN DIEGO BAY COUNCIL

*A coalition of San Diego environmental organizations dedicated to protection and restoration of San Diego's coastal water resources.*

October 27, 2004

Chairman John Minan and Regional Board Members  
California Regional Water Quality Control Board  
9174 Sky Park Court, Suite 100  
San Diego, California 92123-4340

**RE: San Diego Bay Council Comments on Revised Tentative Order No. R9-2004-0154 for Duke Energy South Bay, LLC, South Bay Power Plant**

Dear Chairman Minan and Boardmembers:

San Diego Bay Council ("Bay Council") and its member organizations: Environmental Health Coalition; San Diego Baykeeper; The Surfrider Foundation, San Diego Chapter; San Diego Audubon Society; and Sierra Club, San Diego Chapter; are writing to submit our comments on Revised Tentative Order R9-2004-0154.

Although Bay Council is encouraged to see some improvements in the Revised Tentative Order, we still believe that the proposed order has some serious deficiencies that need to be addressed. In particular, Bay Council strongly recommends that the Board adopt monthly maximum temperature and monthly minimum dissolved oxygen numeric limitations in order to protect beneficial uses in the Bay as required by law.

To summarize this and past comment letters that have detailed issues related to this permit,<sup>1</sup> Bay Council requests that the Board follow-through with its obligation to protect water quality and beneficial uses in the Bay by adopting the following for the SBPP:

- Set monthly maximum water temperature limits that protect beneficial uses;
- Set monthly minimum dissolved oxygen limitations that protect beneficial uses;
- Set residual chlorine limits so they are consistent with the State Ocean Plan requirements; and

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<sup>1</sup> San Diego Bay Council submitted comment letters on August 18, 2004 and September 15, 2004. To this date, neither comment letter has been responded to by Staff. A summary of key comments in our earlier letters are appended in this letter as "Attachment A."

- Adopt a Cease and Desist Order that will obviate the need for the plant to immediately curtail its operations, while allowing Duke to develop a long-term work plan that will serve as the road map to bringing the plant into compliance with the law.

We would also like to note that it was extremely difficult to comment on this Revised Tentative Order as we have yet to get a response from Staff on our comments letters. We have supplied considerable justification and evidence in earlier comments letter. We will summarize our arguments here but we have already supplied an exhaustive analysis in earlier letters and include them again by reference.

**A. Board Should Adopt Numeric Limitations on Temperature and Dissolved Oxygen to Protect Beneficial Uses**

As mentioned in our earlier comment letters, the Revised Tentative Order still does not include any numeric limitations for temperature or dissolved oxygen. Although we are encouraged to see that the Revised Order includes new monitoring for dissolved oxygen and reserves the right to amend the Order in the future to include a numeric limit, we believe that by not adopting a numeric limit at this time consistent with the requirements of the Basin Plan, the health of the Bay will be further degraded.

We refer staff again to the analysis completed by Dr. Richard Ford, a Professor Emeritus of Biology at San Diego State University, that substantiates limits for both maximum temperature and dissolved oxygen. Dr. Ford used six years of existing data to determine options for maximum water temperature limits and minimum dissolved oxygen limits at a compliance point for discharges from the SBPP in order to protect beneficial uses. This Order, however, disregards the existing data and Dr. Ford's recommendations in exchange for an approach that requires more data collection. As Bay Council made clear at the public hearing, the time for studies are over. We know that dissolve oxygen objectives in the South Bay are currently not being met and that the thermal discharge is having a significant impact on beneficial uses (especially on eelgrass populations) -- the Duke Studies only confirmed both of these points. By failing to set a numeric limit for temperature and dissolved oxygen, however, this Order allows business to continue as usual at the power plant without a guarantee of improvement in the term of this permit.

**B. Board Has a Responsibility to Protect Water Quality, Not to Ensure the Performance of Energy Contracts**

We are concerned that staff's reluctance to insert any significant new discharge requirements for the plant, is the fear that Duke will not be able to comply immediately with new requirements and have to reduce/curtail operations, which could force them to violate their reliability must-run ("RMR") contract with the California Independent System Operator.<sup>2</sup> Although that may or may not be true, Bay Council believes it is not this Board's duty to ensure that Duke does not violate an energy contract. Instead, it is the responsibility and mission of this Board to enforce the federal and state water quality

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<sup>2</sup> See Revised Tentative Order at page 5.

laws. As the Tentative Order points out, the plant is currently in violation of sections 316(a) and (b) of the Clean Water Act and results in a significant Adverse Environmental Impact. However, the Tentative Order fails to adopt new limitations on temperature and dissolved oxygen that may end the adverse impacts. Further we believe that an appropriate solution is offered below.

**C. Board Should Adopt a Cease and Desist Order in the Tentative Order to Allow for Reasonable Time for Duke to Comply Without Having to Immediately Curtail Operations**

As Bay Council has stated before in our previous comment letters (dated August 18<sup>th</sup>, 2004 and September 18<sup>th</sup>, 2004), we believe that a Cease and Desist Order is an appropriate tool that the Board can use to provide a time schedule for Duke to achieve full compliance even though they cannot immediately comply with permit requirements while setting a reasonable time schedule to achieve compliance and imposing appropriate penalties if compliance is not attained.

**D. Board Should Adopt the State Ocean Plan's Limits for Residual Chlorine**

The revised permit allows residual chlorine levels that are well in excess of that are set by both the EPA and the State Ocean Plan and do not protect the beneficial uses of the bay. The EPA water quality criteria are 0.013 mg/l maximum concentration and 0.0075 mg/l continuous concentration. The State Ocean Plan for intermittent chlorine discharge depends on the discharge time. Using 80 minutes cited in the Fact sheet for the discharge time gives 0.0096 mg/l total residual chlorine. Table 1 on page 17 of the revised Fact sheet provides effluent values for total measured chlorine that range from 40.00 to 70.0 mg/l. These levels are 4 to 7 times higher than the State Ocean Plan. Even allowing for dissipation of the residual chlorine, the Duke draft Vol. 1, 316(a) study shows on Figure 2.8-2 the measured residual chlorine at the intake and discharge channel to be about the same, with the range from 0.020 to 0.042 mg/l or 2 to 4 times higher than the State Ocean Plan. The Pisces Report, which was submitted by Bay Council in our August 18, 2004 comment letter, also cites that larvae of American oysters have 50% mortality rate with residual chlorine levels less than 0.005 mg/l. Consequently, the State Ocean Plan standards for total residual chlorine should be adopted in this Tentative Order.

**D. Conclusion**

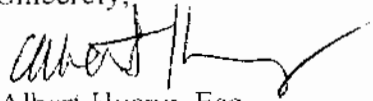
Bay Council requests that the Board follow through with its obligation to protect water quality and beneficial uses in the Bay by adopting the following for the SBPP:

- Set monthly maximum water temperature limits that protect beneficial uses;
- Set monthly minimum dissolved oxygen limitations that protect beneficial uses;

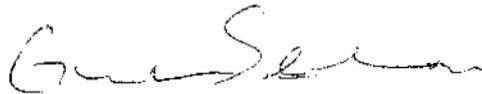
- Set residual chlorine limits so they are consistent with the State Ocean Plan requirements; and
- Adopt a Cease and Desist Order that will obviate the need for the plant to immediately curtail its operations, while allowing Duke to develop a long-term work plan that will serve as the road map to bringing the plant into compliance with the law.

If the above conditions are adopted, Bay Council will fully support the Tentative Order as it would be expected to be protective of water quality and beneficial uses.

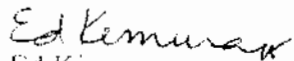
Sincerely,



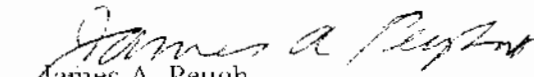
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## Appendix A

### List of Key Comments Made in Bay Council's August 18, 2004 Letter

#### Tentative Order:

1. Page 20, item 2; Prohibit naturally occurring material that is drawn into the once-through cooling system.
2. Page 21, item 4; Replace maximum cooling water discharge temperature by monthly maximum cooling water temperatures.
3. Page 22, item 5; Adopt SWRCB Ocean Plan method for setting total residual chlorine as it is more protective of aquatic life than the Tentative Order.
4. Page 22, item 6; Correct Paragraph C of the TO, add maximum daily intake flow.
5. Page 22, item 7; Require new requirements for dissolved oxygen. a) set minimum monthly dissolved oxygen limits and b) adopt Basin Plan water quality objective for dissolved oxygen.
6. Page 23, item 8; The regression equation used to determine total residual chlorine acceptable for both the discharge effluent as well as the receiving waters is not acceptable. Adopt the SWRCB Ocean Plan for total residual chlorine.

#### Monitoring and Reporting Program:

1. Page 30, item 1; Measure water velocity (with flow meters) at the intake screens at maximum load and period of the day at lowest tide in order to obtain the maximum intake screen velocity.
2. Page 30, item 2; Measure intake flows at each intake pipe to obtain total intake flow.
3. Page 30, item 3; Measure influent and effluent dissolved oxygen twice daily to obtain diurnal changes in dissolved oxygen.
4. Page 30, item 4. Require all effluent parameters (except flow) at location S2 effective immediately upon adoption of the Order and issue a Cease and Desist Order with a compliance schedule.
5. Page 30, item 5; Measure total effluent flow with flow meters appropriately located at each discharge pipe. It is questionable to obtain the continuous flow with 10% specified accuracy at location S2 given the

variations in channel depth and area cross section.

6. Page 31, item 6; Amend the MRP Paragraph D to monitor influent and effluent dissolved oxygen.
7. Page 31, item 8; Conduct experimental toxicity tests with water samples taken at the maximum existing temperatures and maintained during the test.
8. Page 32, item 9; Require compliance the chemical characteristics listed on page 13 of the TO by direct measurements of the receiving waters.
9. Page 32, item 10; Require that chlorophyll (a), total suspended solids and BOD be monitored at the discharge and intake channel to assure compliance with the chemical characteristics of the receiving waters.
10. Page 32, item 11; Describe method and instrumentation used to measure effluent flow.
11. Page 32, item 12; Require additional monitoring stations for residual chlorine including Station N2 and F3.
12. Page 32, item 13; Require seasonal (quarterly) benthic invertebrate sampling.